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10/813,643	03/29/2004	David Leon	037145-3201	4952

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EXAMINER	
MCLEOD, MARSHALL M	
ART UNIT	PAPER NUMBER
2157	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/813,643	LEON ET AL.	
	Examiner	Art Unit	
	MARSHALL MCLEOD	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 April 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-61* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-61* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 April 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This Office action has been issued in response to amendment filed 23 April 2008. Claims 1-61 are pending. Applicants' arguments have been carefully and respectfully considered in light of the instant amendment and are persuasive. Accordingly, this action has been made NON-FINAL.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 1-5, 17-22, 32-37, 46-50 and 60-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein in view of Christensen et al. (Patent No US 6,055,543), hereinafter Christensen.**

4. With respect to claim 1, Klein discloses a method for distribution of a formatted data file in a system capable of point-to-multipoint communications (Figure 3; Column 2, lines 19-26), the method comprising:

a. transmitting the formatted data file from a sender to a plurality of receivers via a point-to-multipoint session (Column 2, lines 11-15);

b. retransmitting the metadata from the sender to the plurality of receivers via the point-to-multipoint session (Column 13, lines 34-40, i.e. full transmission of the set of metadata and being repeated periodically);

wherein retransmission of the metadata can occur at any time during the point-to-multipoint session (Column 3, lines 1-11, i.e. metadata is transmitted in a cyclical (Recurring) fashion, a client can begin receiving the metadata at any point).

Klein does not disclose a formatted data file having metadata and content. However, Christensen discloses a formatted data file having metadata and content (See Figure 5; Also see Column 3, lines 25-28). It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the teachings of Klein with the teachings of Christensen in order to make the data transmission process of a system more efficient by transmitting a single file having both the metadata and content together instead of transmitting the metadata and content separately.

5. With respect to claim 17, Klein discloses identifying all metadata in the formatted data file (Column 2, lines 40-43; i.e. the metadata is placed on a first channel; because the metadata is placed on a separate channel, the metadata has been identified in order for it to be placed separately); and transmitting the identified metadata to a plurality of receivers at an earlier time location than they occur in the original formatted data file in a point-to- multipoint transmission (Column 2, lines 40-49; which discloses transmitting the metadata on a first channel i.e. the channel which transmits first, therefore the metadata will be transmitted before the content, i.e. at

an earlier time than the content regardless of its' order in the formatted data file, due to the nature of the transmission).

6. With respect to claim 19, Klein discloses a system for distributing formatted data file having metadata and a separate formatted data file having content via a point-to-multipoint session (Figure 3; Column 2, lines 19-26), the system comprising:

a. a sender device (Column 2, lines 13-14); and

b. a plurality of receiver devices (Column 2, lines 13-14);

c. wherein the sender device is configured to transmit the formatted data file to the plurality of receiver devices via the point-to-multipoint session (Column 4, lines 14-16); and

d. wherein the sender device is configured to retransmit the metadata to the plurality of receiver devices via the point-to-multipoint session at any time during the point-to-multipoint session (Column 3, lines 1-11, i.e. metadata is transmitted in a cyclical (Recurring) fashion, a client can begin receiving the metadata at any point).

Klein does not disclose a formatted data file having metadata and content. However, Christensen discloses a formatted data file having metadata and content (See Figure 5; Also see Column 3, lines 25-28). It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the teachings of Klein with the teachings of Christensen in order to make the data transmission process of a system more efficient by transmitting a single file

having both the metadata and content together instead of transmitting the metadata and content separately.

7. With respect to claim 32, Klein discloses identifying all metadata in the formatted data file (Column 2, lines 40-43; i.e. the metadata is placed on a first channel; because the metadata is placed on a separate channel, the metadata has been identified in order for it to be placed separately); and transmitting the identified metadata to a plurality of receivers at an earlier time location than they occur in the original formatted data file in a point-to- multipoint transmission (Column 2, lines 40-49; which discloses transmitting the metadata on a first channel i.e. the channel which transmits first, therefore the metadata will be transmitted before the content, i.e. at an earlier time than the content regardless of its' order in the formatted data file, due to the nature of the transmission).

8. With respect to claim 34, Klein discloses a sender device for use in a system for distributing formatted data file having metadata and a separate formatted data file having content (Column 2, lines 19-21), the sender device comprising:

a. means for sending a formatted data file to a plurality of receiver devices via a point-to-multipoint session (Column 2, lines 11-15);

b. means for retransmitting the metadata of the formatted data file to the plurality of receiver devices via a point-to-multipoint session (Column 13, Claim 1, lines 34-40, i.e. full transmission of the set of metadata and being repeated periodically);

c. wherein retransmission of the metadata can occur at any time during the point-to-multipoint session (Column 3, lines 1-11, i.e. metadata is transmitted in a cyclical (Recurring) fashion, a client can begin receiving the metadata at any point).

Klein does not disclose a formatted data file having metadata and content. However, Christensen discloses a formatted data file having metadata and content (See Figure 5; Also see Column 3, lines 25-28). It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the teachings of Klein with the teachings of Christensen in order to make the data transmission process of a system more efficient by transmitting a single file having both the metadata and content together instead of transmitting the metadata and content separately.

18. With respect to claim 46, Klein discloses computer code (Column 2, lines 19-28) configured to:

a. transmit a formatted data file including metadata and content from a sender device to a plurality of receiver devices via a point-to-multipoint session (Figure 3; Column 6, lines 4-7);

b. retransmit the metadata to the plurality of receiver devices via the point-to-multipoint session at any time during the point-to-multipoint session (Column 3, lines 1-11, i.e. metadata is transmitted in a cyclical (Recurring) fashion, a client can begin receiving the metadata at any point).

19. With respect to claim 60, Klein discloses a computer code (Column 2, lines 19-28) configured to:

a. identify all metadata in a formatted data file (Column 2, lines 40-49, i.e. the metadata is identified via the first communication channel and the content is identified via the second communication channel); and

b. transmit the identified metadata at an earlier time location than they occur in the formatted data file in a point-to-multipoint transmission session (Column 2, lines 40-49; which discloses transmitting the metadata on a first channel i.e. the channel which transmits first, therefore the metadata will be transmitted before the content, i.e. at an earlier time than the content regardless of its' order in the formatted data file, due to the nature of the transmission).

Klein does not disclose a formatted data file including metadata and content. However, Christensen discloses a formatted data file including metadata and content (See Figure 5; Also see Column 3, lines 25-28). It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the teachings of Klein with the teachings of Christensen in order to make the data transmission process of a system more efficient by transmitting a single file having both the metadata and content together instead of transmitting the metadata and content separately.

20. With respect to claims 2, 20, 35 and 47 Klein discloses transmitting the formatted data file further comprising transmitting the metadata at an earlier time location in the point-to-

multipoint session than it they occur in the formatted data file (Column 2, lines 40-49; Column 3, lines 13-16; which discloses transmitting the metadata on a first channel i.e. the channel which transmits first, therefore the metadata will be transmitted before the content, i.e. at an earlier time than the content regardless of its' order in the formatted data file, due to the nature of the transmission).

21. With respect to claims 3, 21, 36, and 48 Klein discloses retransmitting the formatted data file further comprises first transmitting the metadata and then transmitting the content (Column 2, lines 40-49; Column 3, lines 13-16; which discloses transmitting the metadata on a first channel i.e. the channel which transmits first).

22. With respect to claim 4, the claim is rejected for the same reasons as claim 1 above. In addition Klein discloses wherein retransmitting the metadata occurs after transmitting the content (Column 3, lines 4-12; i.e. if the client began receiving the metadata at some point other than the beginning…).

23. With respect to claims 5, 22, 37, and 50 Klein discloses retransmitting the metadata comprises retransmitting the metadata a plurality of times (Column 2, lines 51-54).

24. With respect to claims 18, 33 and 61, Klein discloses transmitting the metadata to the plurality of receivers at the beginning of the point-to-multipoint session and after transmitting all metadata (Column 2, lines 40-49; Column 3, lines 13-16), transmitting the content to the

plurality of receivers via the point-to-multipoint transmission session (Column 2, lines 40-49; Column 3, lines 13-16).

26. With respect to claim 49, the claim is rejected for the same reasons as claim 46 above. In addition Klein discloses retransmitting the metadata after first transmitting the metadata and content of the formatted data file (Column 2, lines 31-39).

27. Claims 12, 27, 42 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein in view of Christensen et al. (Patent No US 6,055,543), hereinafter Christensen and further in view of Curcio et al. (Patent No US7,296,205 B2), hereinafter Curcio.

28. With respect to claims 12, 27, 42 and 55, Klein discloses metadata repetition (Column 2, lines 51-54). Neither, Klein or Christensen discloses using a point-to-point repair scheme. However, Curcio discloses using a point-to-point repair scheme (Column 5, lines 4-12).

It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the combined teachings of Klein and Christensen with the teachings of Curcio in order to provide a system with an alternative method to repair loss or missing data, which lessens the burden on system resources.

29. Claims 11, 13-14, 26, 28-29, 41, 43-44, 54 and 56-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein in view of Christensen et al. (Patent No US

6,055,543), hereinafter Christensen and further in view of Lev Ran et al. (Patent No US 7, 139, 811 B2), hereinafter Lev Ran.

30. With respect to claims 11, 26, 41 and 54, neither Klein nor Christensen discloses metadata repetition (Column 2, lines 51-54). Klein does not disclose using an FEC repair scheme in conjunction with the metadata repetition. However, Lev Ran discloses using FEC (Column 52, lines 58-63; it is well known in the art that FEC uses redundant bits to correct errors, which means that FEC is used to allocate redundant bits to correct errors in the metadata if there are any error). It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the combined teachings of Klein and Christensen with the teachings of Lev Ran in order to fix errors and save retransmission bandwidth and delays.

31. With respect to claims 13, 28, 43 and 56, neither Klein nor Christensen discloses using FEC (forward error correction) to allocate more redundancy to the metadata than is allocated to the content. However, Lev Ran discloses using FEC (Column 52, lines 58-63; it is well known in the art that FEC uses redundant bits to correct errors, which means that FEC is used to allocate redundant bits to correct errors in the metadata if there are any error). It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the combined teachings of Klein and Christensen with the teachings of Lev Ran in order to fix errors and save retransmission bandwidth and delays.

32. With respect to claims 14, 29, 44 and 57, neither Klein nor Christensen discloses using FEC for metadata only. However, Lev Ran discloses using FEC (Column 52, lines 58-63; it is well known in the art that FEC uses redundant bits to correct errors, which means that FEC is used to allocate redundant bits to correct errors in the metadata if there are any error). It would have been obvious to a person having ordinary skill in the art at the time of the invention to specifically modify the combined teachings of Klein and Christensen with the teachings of Lev Ran in order to fix errors and save retransmission bandwidth and delays.

33. Claims 12, 27, 42 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein in view of Christensen et al. (Patent No US 6,055,543), hereinafter Christensen, in view of Curcio et al. (Patent No US7,296,205 B2), hereinafter Curcio and further in view of Rahman (Patent No US 7,243,365 B1).

34. With respect to claims 15, 30 and 58, Klein as modified discloses transmitting the formatted data file from a sender to a plurality of receivers via a point-to-multipoint session (Klein, Column 2, lines 11-15); and using point-to-point data repair to repair errors (Curcio, Column 5, lines 4-12) in receipt of metadata.

Neither Klein nor Christensen nor Curcio discloses wherein the receivers are restricted such that they can request metadata but not content via point to point repair. However, Rahman discloses wherein the receivers are restricted such that they can request metadata but not content (Column 6, lines 29-31) via point to point repair. It would have been obvious to a person having ordinary

skill in the art at the time of the invention to specifically modify the combined teachings of Klein, Christensen and Curcio with the teachings of Rahman in order to reduce system resource and bandwidth consumption by only sending requested data and nothing else.

35. With respect to claims 16, 31, 45 and 59, Klein as modified discloses transmitting the formatted data file from a sender to a plurality of receivers via a point-to-multipoint session (Klein, Column 2, lines 11-15); and using point-to-point data repair to repair errors (Curcio, Column 5, lines 4-12) in receipt of metadata.

Neither Klein nor Christensen nor Curcio discloses wherein the receivers are restricted such that they can send metadata but not content via point to point repair. However, Rahman discloses wherein the sender is restricted such that it can send metadata but not content via point-to-point repair (Column 6, lines 29-42) via point to point repair. It would have been obvious to a person having ordinary skill in the art at the time of the invention to specifically modify the combined teachings of Klein, Christensen and Curcio with the teachings of Rahman in order to reduce system resource and bandwidth consumption by only sending requested data and nothing else.

36. **Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein in view of Christensen and further in view of Luby et al., RFC 3452, hereinafter Luby.**

37. With respect to claim 6, the claim is rejected for the same reasons as claim 1 above. In addition Klein discloses wherein the formatted data file is transmitted in discrete packets and

wherein the sender retransmits packets containing metadata (Klein, Column 2, lines 40-51). Klein does not show each packet having a Source Block Number (SBN) and an Encoding Symbol Identifier (ESI). However, Luby discloses a Source Block Number followed by a 32-bit Encoding Symbol ID (Luby, Page 4, Paragraph 1 ("FEC Encoding ID 129…").
It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the combined teachings of Klein and Christensen with the teachings of Luby in order to speed up the error correction process by specifically point out the information that needs to be corrected in the retransmission.

38. With respect to claim 7, the claim is rejected for the same reasons as claim 1 above. In addition Klein discloses the formatted data file and the retransmitted metadata (Column 13, Claim 1, lines 34-40). Klein does not disclose that the formatted data file and the retransmitted metadata are assigned different Transport Object Identifier (TOI) values. However, Luby discloses assigning different Transport Object Identifier (TOI) (Luby, Page 6, Paragraph 2 ("The FEC building block…").
It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the combined teachings of Klein and Christensen with the teachings of Luby in order to speed up the error correction process by specifically pointing out the receiver the information that is being transmitted.

39. **Claims 8, 23, 38 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein in view of Christensen and further in view of Rahman (Patent No US 7,243,365 B1).**

40. With respect to claims 8, 23, 38 and 51, neither Klein nor Christensen discloses wherein the plurality of receivers are informed by the sender that metadata repetition will be supported in the point-to-multipoint session. However, Rahman discloses wherein the plurality of receivers are informed by the sender that metadata repetition will be supported in the point-to-multipoint session (Column 2, lines 54-56, i.e., announcing and identifying metadata).
It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the combined teachings of Klein and Christensen with the teachings of Rahman in order to make error correction more efficient and faster by letting all the receivers know ahead of time what mode to be in, in order to receive the corrected data.

41. **Claims 9-10, 24-25, 39-40, 52 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein in view of Christensen in view of Rahman and further in view Handley et al., RFC 2327, hereinafter Handley.**

42. With respect to claims 9, 24, 39 and 52, Klein as modified discloses wherein a plurality of receivers are informed by the sender that metadata repetition will be supported (Rahman, Column 2, lines 54-56, i.e., announcing and identifying metadata). Neither Klein nor Christensen nor Rahman discloses that metadata repetition will be supported via Session

Description Protocol (SDP). However, Handley discloses using Session Description Protocol (SDP) (Handley, Page 5, Paragraph 5.4 i.e. "SDP may include additional pointers in the form of Universal Resources Identifiers (URIs)").

It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the combined teachings of Klein, Christensen and Rahman with the teachings of Handley in order to make error correction more efficient and faster by letting all the receivers know ahead of time what mode to be in, in order to receive the corrected data.

43. With respect to claims 10, 25, 40 and 53, Klein as modified discloses wherein the metadata repetition attribute is communicated to the receivers (Rahman, Column 2, lines 54-56, i.e., announcing and identifying metadata). Klein as modified also discloses using URI (Handley, Page 5, Paragraph 5.4 i.e. "SDP may include additional pointers in the form of Universal Resources Identifiers (URIs)").

Response to Arguments

44. Applicants' arguments with respect to objections and rejections not repeated herein are moot, as the respective objections and rejections have been withdrawn in light of the instant amendments.

Conclusion

45. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARSHALL MCLEOD whose telephone number is (571)270-3808. The examiner can normally be reached on Monday - Thursday 6:30 a.m-4:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

M.M.

/Ario Etienne/
Supervisory Patent Examiner, Art Unit 2157